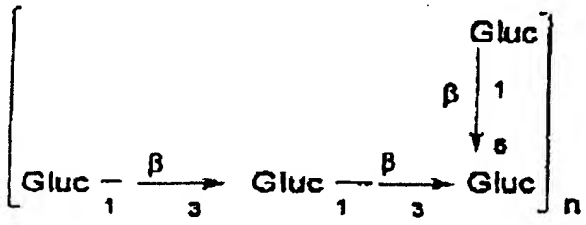
CLAIMS

1. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one oligosaccharide substance which is capable of modifying apoptosis dysfunctions and which optionally comprises, on at least some of its individual units, at least one substituent of the group comprising sulfate, methyl and acetyl groups, said substance being chosen from the group comprising :

- the oligosaccharides which are derived, by enzymatic or chemical process, from the polymers of the group comprising (1→3)-β-glucans which optionally comprise (1→6)-β- branching, and
- the oligosaccharides which are derived, by enzymatic or chemical process, from sulfated galactans, in particular carrageenans, agars and porphyrans.

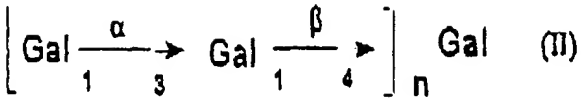
2. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one oligosaccharide which is capable of modifying apoptosis dysfunctions and which satisfies the formula:



(I)

in which n represents an integer from 1 to 50, preferably from 5 to 10, and in which the number of branches varies from 0 to 3 per repeat unit.

3. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one repeat disaccharide which is capable of modifying apoptosis dysfunctions and which satisfies the formula :



(II)

in which n represents an integer from 1 to 50, preferably from 1 to 20, at least some of the repeat disaccharides of formula (II) possibly comprising one or more sulfate groups.

4. Medicine, characterized in that it comprises, as an active principle, an effective amount of the product which is capable of at least partially inhibiting apoptosis and which is obtained by hydrolysis from sodium iota-carrageenate, this product consisting of a mixture of oligo-iota-carrageenans which is referred to as I_9, which has a total saccharide content (determined according to Tillmans and Philippi) of 62%, and which has a distribution profile by size, which is estimated by electrophoresis on polyacrylamide gel according to Zablakis and Perez, of

iota-neocarratetraose	(DP 2)	8-12%
iota-neocarrahexaose	(DP 3)	23-27%
iota-neocarraoctaose	(DP 4)	18-22%
iota-neocarradecaose	(DP 5)	13-17%
iota-neocarradodecaose	(DP 6)	8-12%
oligo-iota-carrageenan	(DP 7)	3- 7%
oligo-iota-carrageenans consisting of 8 to 15 repeat disaccharides	(DP 8-15)	13-17%.

5. Medicine, characterized in that it comprises as an active principle, an effective amount of the product which is capable of activating apoptosis dysfunctions, and which is obtained by acidic aqueous extraction from brown algae and more particularly from a brown alga named *Laminaria digitata*, this product consisting of a mixture of oligo-(1→3)-β-glucans which are referred to as L_{11} and

comprise from 1 to 50, preferably from 20 to 30, saccharide units, the product in question having the NMR spectrum shown in Figure 1.

6. Medicine, characterized in that it comprises, as an active principle, an effective amount of the product which is capable of activating apoptosis dysfunctions and which consists of fraction DP 7 of the product I_9.

7. Method for preparing a medicine for treating apoptosis dysfunction, characterized in that a pharmaceutical composition comprises at least one of the active principles of the medicine according to at least one of Claims 1 to 6.

8. Use, with a view to preparing a medicine for treating apoptosis dysfunctions, of at least one of the oligosaccharide substances which optionally comprise, on at least some of their individual units, at least one substituent of the group comprising sulfate, methyl and acetyl groups, said substances which are capable of modifying apoptosis dysfunctions being chosen from the group comprising

- the oligosaccharides which are derived, by enzymatic or chemical process, from the polymers of the group comprising (1→3)-β-glucans which optionally comprise (1→6)-β- branching, and
- the oligosaccharides which are derived, by enzymatic or chemical process, from sulfated galactans, in particular carrageenans, agars and porphyrans.

9. Use, with a view to preparing a medicine for treating apoptosis dysfunctions, of the oligosaccharides of formula (I) and of those of formula (II).

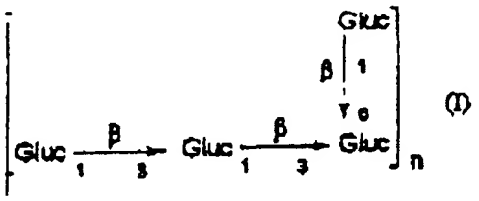
10. Use of the products which are referred to as I_9 and L_{11} and of the product constituting fraction DP 7 of the product I_9 with a view to preparing medicines for treating apoptosis dysfunctions.

CLAIMS

1. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one oligosaccharide substance which is capable of modifying apoptosis dysfunctions and which optionally comprises, on at least some of its individual units, at least one substituent of the group comprising sulfate, methyl and acetyl groups, said substance being chosen from the group comprising :

- the oligosaccharides which are derived, by enzymatic or chemical process, from the polymers of the group comprising (1→3)-β-glucans which optionally comprise (1→6)-β- branching, and
- the oligosaccharides which are derived, by enzymatic or chemical process, from carrageenans, from agars and from porphyrans.

2. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one oligosaccharide which is capable of modifying apoptosis dysfunctions and which satisfies the formula :

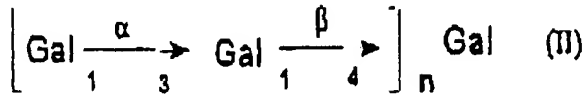


(I)

in which n represents an integer from 1 to 50, preferably from 5 to 10, and in which the number of branches varies from 0 to 3 per repeat unit.

3. Medicine, characterized in that it comprises, as an active principle, an effective amount of at least one

repeat disaccharide which is capable of modifying apoptosis dysfunctions and which satisfies the formula :



(II)

6. Medicine, characterized in that it comprises, as an active principle, an effective amount of the product which is capable of activating apoptosis dysfunctions and which consists of fraction DP 7 of the product I, according to Claim 4.

7. Method for preparing a medicine for treating apoptosis dysfunctions, characterized in that a pharmaceutical composition comprises at least one of the active principles of the medicines according to at least one of Claims 1 to 6.

8. Use, with a view to preparing a medicine for treating apoptosis dysfunctions, of at least one of the oligosaccharide substances which optionally comprise, on at least some of their individual units, at least one substituent of the group comprising sulfate, methyl and acetyl groups, said substances which are capable of modifying apoptosis dysfunctions being chosen from the group comprising :

- the oligosaccharides which are derived, by enzymatic or chemical process, from the polymers of the group comprising (1→3)-β-glucans which optionally comprise (1→6)-β- branching, and

- the oligosaccharides which are derived, by enzymatic or chemical process, from carrageenans, from agars and from porphyrans.

9. Use, with a view to preparing a medicine for treating apoptosis dysfunctions, of the oligosaccharides

of formula (I) and of those of formula (II).

10. Use of the products which are referred to as I_9 and L_{11} and of the product constituting fraction DP 7 of the product I_9 according to Claim 4 with a view to preparing medicines for treating apoptosis dysfunctions.